

USSR/Human and Animal Morphology. Skeleton.

S

Abs Jour: Ref Zhur-Biol., No 15, 1958, 69653.

Author : Gurfinke'l V.S., Yakobson Ya. S.

Inst : Central Scientific Research Institute for Prostheses.

Title : Certain Peculiarities of Movement in the Knee Joint.

Orig Pub: Inform. byul. Tsentr. n.-i. in-ta protezir. i protezostr.,
1957, No 2. 21-24.

Abstract: X-ray cinematographic studies were made of motion in the knee joint in five healthy subjects and six subjects with stumps below the knee. In all cases, at the onset of bending (from zero to about ten degrees) there is rolling without sliding. Further bending (to 30-40 degrees) is characterized primarily by sliding, after which the movement involves both sliding and rolling (30-50 degrees). At angles up

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617430004-6"

Abs Jour: Ref Zhur-Biol., No 15, 1958, 69653.

to 70-90 degrees movement is achieved chiefly by rolling, and with further flexion the movement is primarily sliding. In extension of the joint, sliding is seen more frequently than in flexion. The crucial ligaments of the knee joint during flexion are seen to be alternately in tense, then in relaxed states. The magnitude of rotation of the knee with respect to the thigh in flexion and extension averages five to eight degrees. The conclusion is reached that movement in the knee joint is determined by the form of the apposed joint surfaces, the structure and functions of the ligaments, and the nature of application of muscular forces.

Card : 2/2

Gurfinkel V.S.

AUTHORS: Breydo, M., Engineer, Gurfinkel', V., Physician 29-4-2/20
TITLE: Machine is Controlled by Thought (Mashinoy upravlyayet mys')
PERIODICAL: Tekhnika Molodezhi, 1958, Nr 4, pp. 3-4 (USSR)

ABSTRACT: A curious device can be seen in the Soviet pavilion at the world exhibition in Brussels. It is an artificial hand with a bracelet fixed to a cable. A man who puts this bracelet round his wrist, is able to make this hand a balled fist and to make it carry out other small grasps too. Only by this thoughts this miracle was constructed for the first time in the Central Institute for Scientific Researches for Artificial Limbs in Moscow, in 1957. Then, only the direction and the speed of the finger-movements could be influenced by one's thoughts. The exposed model is substantially refined. Numerous inventions in the most various fields of science by the Soviet specialists A. Ye. Kobrinskiy, A. Ya. Sysin, M. L. Tseytlin, Ya. S. Yakobson and by the authors of this article were applied for its manufacture. The mechanism is based on the principle of changes of the electric potential, the socalled bio-current in the human organism. A socalled "mechanical hand" for manipulating with insanitary, especially with radioactive substances was

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Machine is Controlled by Thought

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exposed at the All Union Industrial Exhibition at the time. Instruments reacting more accurately and finer than the "mechanical hand" could be made by means of a bioelectrically controlled manipulator. Due to the fact that the amplified bio-current can also be conducted per wire and radio, men would be able to effect operations at a distance of thousands of kilometers without moving from the desk in their office. Such "bio-current-hands" would be able e.g. to equip bathispheres sunk to great depths astronautical craft, atomic laboratories and many other things. The application of bioelectrical systems is of greatest interest with artificial limbs. The manufacture of a bioelectrical artificial hand is in progress at present. The application of such artificial limbs with men with amputated arms and legs would be equally promising. The application of bioelectric control for medical purposes is very prospective. A gymnastic apparatus which is self-controlled by the patient, as well as a respirator could be used in the case of polyomelitis. The self-controlled respirator would be of special importance since its use would cause the respiration of the patient to become active which accelerates the functions lost by the nervous cells. The biocurrent of the respiratory muscle could also serve for controlling the respiratory

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apparatus with diving. The application of bio-current is also tempting in the complex control of machinery. It could be imagined that a pilot makes his aircraft effect the most complicated changes of position only by his reasoning. The advantage of such a control consists in that a more rapid and more accurate reaction is achieved, since the decelerating muscle-reaction is avoided. There are 2 figures.

AVAILABLE: Library of Congress

1. Artificial limbs-USSR
2. Exhibitions-Brussels-USSR
3. Biotechnology-USSR
4. Scientific research-USSR

Card 3/3

PHASE I. BOOK EXPLOITATION: SCY/3176

9(5)

Problemy Kibernetiki, vyp. 2 (Problems of Cybernetics, No. 2). Moscow, Printzitiz, 1959. 323 p. Errata slip inserted. 18,000 copies printed.

Ed.: A. A. Ilyasov; Compiler-Editor: O. B. Lupanov. Yu. V. Khablinsky, and Yu. I. Yanov; Eds.: B. Yu. Pilchuk, S. V. Tikhonov, and M. L. Smolyantsev; Tech. Eds.: A. A. Kompliyantkin, and M. N. Abliazov.

PURPOSE: The purpose of this collection of articles is to organize scientific papers on cybernetics and to unite the efforts and interests of Soviet scientists working in this field.

COVERAGE: This is the second volume of "Problemy Kibernetiki", dealing with problems of biology, mathematics and engineering as they relate to cybernetics. The first volume, which appeared in 1958, considered problems of programming, machine translation and computer design. Future volumes propose to include still greater number of subjects related to cybernetics. The editors have selected Soviet books (including 2 translations) dealing with cybernetics. They thank the following persons (including 5 recent Soviet books) for publishing their papers: G. L. Svetlin, G. I. Gulyaeva, A. A. Muchnik, B. I. Finikov, M. L. Svetlin and V. S. Shchegolev. References follow each article.

PART IV. CONTROL SYSTEMS AND COMPUTERS

Shablin, A.N., and V.M. Shablin (Moscow). Operational cathode-ray tube storage device 191

The authors describe the principle of operation of the storage device for the Soviet computer "Sputnik-1", which consists of cathode-ray tubes of the Potashnikov type with a storage capacity of 2048 words of 43 bits. No references are given.

Brazdo, M.O., V.S. Gurevich, A.Ye. Kabanitsky, A.Ye. Srasin, N.L. Tretlin, and T.S. Yagutin (Moscow). On the Biogalactic System of Control 203

The article deals with the utilization of biological myoelectric currents in the operation of technical devices. It also describes the principles of operation and design of a model of a servo-drive built for this purpose. There are 12 references. 5 Soviet (1 translation), 2 German and 5 English.

PART V. CONTROL PROCESSES IN LIVING ORGANISMS

Slobodcikov, N.V., and R.H. Ermak (Berlin). On Statisticity and Asymmetry Principle in Biology 213

This article concerns problems of circulation of hereditary information from generation to generation and the physical processes involved in concerns relations between biology, engineering and mathematics in the investigation of control processes occurring in living organisms. The authors give examples of 11 Soviet (5 translations), 18 English, 14 German, and 4 French. (2 translations), and 2 English.

PART VI. PROBLEMS OF MATHEMATICAL LINGUISTICS

Kulagina, O.S., and G.V. Vakulovskaya (Moscow). Experimental Translations from French into Russian on the "Strela" Computer 229

The programming algorithms for the machine translation of mathematical texts from French into Russian were developed by O.S. Kulagina and L.I. Mel'nikov. These algorithms assume the existence of a special vocabulary which contains not words but formulas. The authors describe the class of logical operations used. The sequence of operators will indicate their sequence of performance. The following types of operators are used: condition, result, if-then and neutral (finish, halt, iteration, etc.). The author of "Strela" is the method of construction of these operators.

VINOGRADOVA, T.S.; starshiy nauchnyy sotrudnik; GURFINKEL', V.S., starshiy nauchnyy sotrudnik; SLAVUTSKIY, Ya.L., nauchnyy sotrudnik

Electromyographic examinations in a prosthetic orthopedic clinic. Trudy Ukr. nauch.-issl. inst. ortop. i travm. no.15: 231-241 '59 (MIRA 16:12)

1. Iz Tsentral'nogo nauchno-issledovatel'skogo instituta protezirovaniya i protezostroyeniya.

GURFINKEL', V.S.; IVANOV, D.I.; IVANOV, A.Ye.; MALKIN, V.B.

Use of Na^{24} in studying blood circulation during respiration under increased pressure. Biofizika 4 no. 4:498-503 '59. (MIRA 14:4)

1. Nauchno-issledovatel'skiy institut aviatsionnoy meditsiny, Moskva.
(SODIUM-ISOTOPES) (OXYGEN-PHYSIOLOGICAL EFFECT)
(BLOOD-CIRCULATION)

KOBRINSKIY, A.Ye.; BREYDO, M.G.; GURFINKEL', V.S.; POLYAN, Ye.P.;
SLAVUTSKIY, Ya.L.; SYSIN, A.Ya.; TSNTLIN, M.L.; YAKOBSON, Ya.S.

Research on the development of bioelectric control systems.
Trudy Inst.mash.Sem.po teor.mash. 20 no.77:39-50 '59.
(MIRA 13:4)

(Electrophysiology)

GURFINKEL', V.S.; ISAKOV, P.K.; MALIKIN; POPOV, V.I.

Coordination of posture and movements in man under conditions of increased and lowered gravitation. Biul.ekspl.biol.i med. 48 no.11: 12-18 N '59. (MIRA 13:5)

1. Iz Instituta eksperimental'noy biologii i meditsiny sibirs'kogo otdeleniya Akademii nauk SSSR (dir. - prof. Ye.N. Meshalikin), Novosibirsk. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.

Parinym.

(GRAVITATION)
(POSTURE physiol.)
(MOVEMENTS physiol.)

GURFINKEL, V.S.

DECR

(INITIATION OF MEDICAL
ELECTRONICS.)

Tentative reports for the 3rd Int'l
Conference on Medical Electronics,*
London, England, 21-27 Jul 60.

GURFINKEL, V. S., Institute of Experimental
Physiology and Medicine, Siberian Dept., Acad. of
Sciences USSR, KALININ, V. P., Scientific
Research Testing Institute of Aviation
Medicine, Moscow, and ZEMLIN, M. L. - "Some
aspects of the problem of bio-electrical
control of medical appliances" (Section 3)
(Section 1)

* KERZENBOG, A. G., Head, Physiology Dept.,
Scientific Research Center, Institute of
Aviation Medicine - "A survey" (Section 6)

LEKHINSKY, A. V., Corresponding Member,
Academy of Medical Sciences USSR - "Biological
applications of isotopes" (Section 3)

MORALSKO, K., Cherniv Institute of
Evolutionary Radiobiology, Academy of Sciences
USSR, Leningrad - "Peculiarities of
absorption of ultrahigh frequency radiation
in tissues of the body" (Section 4)

* PARIN, V. V., Prof., Active Member, Academy of
Medical Sciences USSR - "Development of
ballistostadiographic techniques in the
USSR" (Section 4)

GURFINKEL', V. S.

Doc Med Sci - (diss) "Posture *[stoyaniye]* of healthy people and people prosthesized after amputation of the lower extremities." Moscow, 1961. 25 pp; (Academy of Medical Sciences USSR); 300 copies; price not given; list of author's works on p 25 (15 entries); (KL, 7-61 sup, 255)

GURFINKEL', V.S.; MALKIN, V.B.; TSEYTLIN, M.L.

Method for electric stimulation of the heart. Biofizika 6
no. 1:125-126 '61. (MIRA 14:2)
(ELECTROCARDIOGRAPHY)

GURFINKEL, V. S.

MIESZALKIN, E.H. (Nowosybirsk); FRANCEW, W.I. (Nowosybirsk); GURFINKEL,
W.S. (Nowosybirsk); COLOWANOW, J.H. (Nowosybirsk)

Immediate and remote observations on hemodynamics after cavopulmonary
anastomosis. Polski przegl. chir. 33 no.7/9:1034-1039 '61.
(HEART DEFECTS CONGENITAL surg)
(PULMONARY ARTERY surg) (VENAE CAVAE surg)

GURFINKEL', V.S. (Moskva, A-319, 1-y TSvetkovskiy per., d.19, kv.43);
MALKIN, V.B.; TSETLIN, M.L.; KHUDYAKOV, A.V.

Roentgenography of the heart during phases of the cardiac cycle
selected at random. Vest. rent. i rad. 36 no.6:25-28 N-D '61.
(MIRA 15:2)

1. Iz Instituta eksperimental'noy biologii i meditsiny Sibirskogo
otdeleniya AN SSSR i Matematicheskogo instituta imeni V.A.Steklova
AN SSSR. (HEART--RADIOGRAPHY)

VLASOV, Yu.A.; GURFINKEL', V.S.; IVANOV, D.I.; MALKIN, V.B.; POPOVA, Ye.O.;
SHIK, M.L.

Hemodynamic studies during the respiration of O_2 under excessive pressure. Biul. eksp. biol. i med. 51 no. 4: 22-27 Ap '61.
(MIRA 14:8)

1. Iz Instituta eksperimental'noy biologii i meditsiny (dir. - prof. Ye. N. Meshalkin) Sibirskogo otdeleniya AN SSSR, Novosibirsk.
Predstavlena deystvitel'nym chlenom AMN SSSR V. V. Parinym.
(BLOOD—CIRCULATION) (RESPIRATION)
(ATMOSPHERIC PRESSURE—PHYSIOLOGICAL EFFECT)

GURFINKEL, V.S.; KAPULLER, L.L.; SHIK, M.L.

Significance of sphincters of the orifices of the pulmonary veins
in man. Biul. eksp. biol. i med. 51 no.6:14-17 Je '61. (MIRA 15:6)

J. Iz Instituta eksperimental'noy biologii i meditsiny Sibirskogo
otdeleniya AN SSSR (dir. - prof. Ye.N. Meshalkin) i 52-y
gorodskoy klinicheskoy bol'nitsy (glavnnyy vrach P.S. Petrushko).
Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Parinym.
(PULMONARY VEIN)

GURFINKEL', V.S.; MALKIN, V.B.; TSETLIN, M.L.; KHUDYAKOV, A.V.

Use of bioelectric signals of the heart for the purpose of control.
Vop. pat. i reg. org. krov. i dykh. no.1:33-37 '61. (MIRA 18:7)

VINOGRADOVA, T.S.; VLASOV, Yu.A.; GURELINKEL', V.S.; SHIK, M.L.

Clinical and physiolcgical parallels in congenital and acquired heart
defects. Vop. pat. i reg. org. krov. i dykh. no.1 '77-87 '61.
(MIRA 18:7)

GURFINKEL', V.S.

Bioelectric control in medicine. Vest. AMN SSSR 19 no.2:33-38
'64. (MIRA 18:1)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

GURFINKEL', V.S.; KANDEL', E.I.; KOTS, Ya.M.; SHIK, M.L.

Mechanism of the origination of tremor in parkinsonism. Zhur. nevr. i
psikh. 65 no.5:645-651 '65. (MIRA 18:5)

1. Institut biologicheskoy fiziki AN SSSR i Ordona Trudovogo Krasnogo
Znameni Institut neyrokhirurgii im. Burdenko AMN SSSR, Moskva.

QURFINKEL', V.S.; PAL'TSEV, Ye.I.

Effect of the state of the segmental apparatus of the spinal cord
on a simple motor reaction. Biofizika 10 no. 5:855-860 '65.

(MIRA 18:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

GEL'FAND, I.M.; GURFINKEL', V.S.; TSETLIN, M.L.

Some considerations on the tactics of the formation of movements. Dokl. AN SSSR 139 no.5:1250-1253 Ag 4 '61.
(MIRA 14:8)

1. Institut biologicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Gel'fand).
(MOVEMENT, PSYCHOLOGY OF)

GURFINKEL', V.S., otv. red.; VAL'TER, M. [Valters, M.], red.;
ROZE, A., tekhn. red.

[Electronics in medicine] Elektronika v meditsine;
sbornik materialov. Riga, TSentr. biuro tekhn. in-
formatsii Latviiskoi SSR, 1962. 260 p. (MIRA 16:11)

1. Nauchno-tehnicheskoye obshchestvo radiotekhniki i
elektrosvyazi im. A.S. Popova.
(MEDICAL ELECTRONICS)

S/030/62/000/008/005/005
I015/I242

AUTHOR: Gurfinkel', V.S., Candidate of Medical Sciences

TITLE: Cybernetics in biology

PERIODICAL: Akademiya nauk SSSR. Vestnik, no.8, 1962, 125-128

TEXT: The biological aspects of cybernetics were discussed at a session of the Academy of Sciences of the USSR, on April 3-5. Academician N.M.Sisakyan, secretary of the Biology section, pointed out in his opening speech that cybernetics, though a young science, has already contributed to the progress of biology.

A.I.Berg talked on "Cybernetics and the Progress of Science and Technology." He mentioned the fact that in the USSR cybernetics is developing on a firm basis of dialectical materialism, and that it was called upon by KPSS to contribute to the rapid development of science and technology. V.V.Parin discussed the application of cybernetics to biology and medicine, and mentioned the artificial heart, lungs, and kidneys as examples. The role of mathematics,

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S/030/62/000/008/005/005
I015/I242

Cybernetics in biology

biophysics, biochemistry, and engineering in modern biological research was discussed by many members of the Academy. A project on the use of electric computers in the solution of important biological problems has been planned by M.A.Ayzman and M.M.Bongard. V.I.Varshavskiy, I.P.Vorontsova, and M.L.Tsetlin proposed a mathematical model of behavior.

Card 2/2

GEL'FAND, I.M.; GURFINKEL', V.S.; KOTS, Ya.M.; TSETLIN, M.L.; SHIK, M.L.

Synchronization of motor units and its model representation.
Biofizika 8 no.4:475-487 '63.

(MIRA 17:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

VLASOV, Yu.A.; GURFINKEL', V.S.; SHIK, M.L.

Model of an aperiodic ballistocardiography and the description of
a aperiodic ballistocardiogram in healthy persons. Biul. eksp. biol.
i med. 57 no.6:103-106 Je '64. (MIRA 18:4)

1. Institut eksperimental'noy biologii i meditsiny (dir. - prof.
Ye.N.M-shalkin) Sibirskogo otdeleniya AN SSSR, laboratoriya
fiziologii (zav. - kand.med.nauk T.S.Vinogradova) i Institut
biofiziki (dir. G.M.Frank) AN SSSR.

GRIL'FAN, I.Ya.; GUREVICH, V.D.; KITS, Ya.M.; KLIBANOV, V.E.;
KOETLICH, M.L.; SHIK, M.I.

Study of postural activity. Biofizika 9 no.6.710-717 '64.
(MIRA 18:7)

1. Institut biologicheskoy fiziki AN SSSR, Moscow.

GAAZE-RAPOORT, M.G., otv. red.; YAKOBI, V.E., otv. red.;
BERG, A.I., red.; GURFINKEL', V.S., red.; KOVALEVSKIY,
V.A., red.; KLEYNENBERG, S.Ye., red.; MANTEYFEL', B.P.,
red.; NAUMOV, N.P., red.; PARIN, V.V., red.; POLYANTSEV,
V.A., red.; SOTSKOV, B.S., red.;

[Bionics] Bionika. Moskva, Nauka, 1965. 475 p. (MIRA 18:12)

1. Akademiya nauk SSSR. Nauchnyy sovet po kompleksnoy probleme.
"Kibernetika."

GURFINKEL', V.S.; KOTS, Ya.M.; KRINSKIY, V.I.; SHIK, M.I.

Method of evaluating the state of the inhibition apparatus in
human spinal cord. Biul.eksp.biol. i med. 59 no.5:15-18 '65.
(NIRA 18:11)

1. Teoreticheskiy otdel (zav. - chlen-korrespondent AN SSSR
I.M.Cel'fand) Instituta biologicheskoy fiziki (direktor -
chlen-korrespondent AN SSSR G.M.Frank) AN SSSR, Moskva.
Submitted December 12, 1963.

GRAFINKEI', V.S.; KENDIL', S.I.; KOLS, Ye.M.; SIEK, A.L. (Mc. 1a)

Use of tremor-eliminating principles of the effectiveness of surgical treatment of spinales. Vop. neirokhir. 27 no. 4:
1-6 Jl-Ag'63 (MTR 17:2)

1. Nauchno-issledovatel'stvennyy ordena Trudovogo Krasnogo znameni institut neirokhirurgii imeni N.N.Burdenko AMN SSSR i Institut biofiziki Akademii Nauk.

GURFINKEL', Viktor Semenovich; KOTS, Yakov Mikhaylovich; SHIK,
Mark L'vovich; KOLPAKOVA, Ye.A., red.; TSUZER, T.S., red.

[Regulation of human posture] Reguliatsiia pozy cheloveka.
Moskva, Nauka, 1965. 255 p. (MIRA 18;6)

ACCESSION NR: AP4012878

S/0248/64/000/002/0033/0038

AUTHOR: Gurfinkel', V. S.

TITLE: Bioelectric control in medicine

SOURCE: AMN SSSR. Vestnik, no. 2, 1964, 33-38

TOPIC TAGS: bioelectric control device, bioelectric potential, EEG, EKG, skeletal muscle biopotential, automatic control device, EKG data analysis device, cardiosynchronizing device, cardiostimulator, medical automatic control device, hypoxia control device, epileptic paroxysm, anesthesia control device

ABSTRACT: Three groups of bioelectric control devices based on brain, heart, and skeletal muscle biopotentials are discussed. The first group uses brain biopotentials for EEG and includes devices which automatically indicate the onset of hypoxia, anesthesia stages, and appearance of epileptic paroxysms. The second group uses heart biopotentials for EKG and includes various cardiosynchronizing devices which automatically switch on other equipment depending on the heart cycle. RITM-1, a device developed for continuous analysis of EKG data, automatically records any abnormal shifts, flashes danger

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ACCESSION NR: AP4012878

signals, switches on necessary equipment, and has been successfully used in postoperative care of patients. Others in this group are a device which automatically switches on a cardiostimulator after 10-15 successive cardiocycles indicate S-T interval shifts, and a device which automatically assists the heart in circulating blood when the EKG indicates difficulties. The third group uses skeletal muscle biopotentials in active prostheses when the muscles are mechanically weak as in paralysis or are completely absent as in amputation. Artificial lungs also belong to this group. With the extensive development of bioelectric devices and their wide range of application, the problem now is to accelerate their use in standard medical practice. Orig. art. has: 3 figures.

ASSOCIATION: Institut biologicheskoy fiziki AN SSSR, Moscow
(Institute of Biological Physics, AN SSSR)

SUBMITTED: 00

DATE ACQ: 02Mar64

ENCL: 00

SUB CODE: AM

NO REF Sov: 000

OTHER: 000

Card 2/2

GURGAL', V. I.

AID P - 5385

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 15/28

Author : Gurgal', V. I.

Title : High-production cutters

Periodical : Stan. i instr., 9, 31-32, 1956

Abstract : The author describes three cutters of his own design: the shearing, stepped, and multi-cutting edge cutters which have been used at the L'vov (Ukrainian SSR) Plant for Power Pressing Machines. Three drawings.

Institution : As above

Submitted : No date

OURGAL', Valodimir Iosipovich; VITVITS'KIT, M., redaktor; MEDOVIZ, S.,
tekhnicheskiy redaktor

[Methods of increasing labor productivity in lathe work] Metody
pidvyshchennia produktyvnosti pratsi pri tokarnii obrabotki. L'viv,
Kuyzhkovo-zhurnal'ne vyd-vo, 1957. 44 p. (MLRA 10:9)

1. Vidomiy tokar-novator L'viva's'kogo zavodu privodnykh presiv,
deputat Verkhovnoi Radii URSR (for Ourgal')
(Turning)

GURGAL', V., Geroy Sotsialisticheskogo Truda

Everything is our concern. Sov.profsoiuzy 17 no.10:24-25 My '61.
(MIRA 14:5)

1. Rukovoditel' brigady kommunisticheskogo truda L'vovskogo
mashinostroitel'nogo zavoda.

(Lvov—Machinery industry) (Socialist competition)

GURGAL', Vladimir Iosifovich[Kurhal', V.O.], Geroy Sotsialisticheskogo Truda, tokar'; DOROSHENKO, M., red.; BURKATOVSKAYA, TS. [Burkatovs'ka, TS.], tekhn. red.

[Twenty days beyond the ocean] 20 dniv za okeanom. L'viv, Knizhkovo-zhurnal'ne vyd-vo, 1962. 38 p. (MIRA 15:11)

1. L'vovskiy mashinostroitel'nyy zavod (for Gurgal').
(Canada—Description and travel)
(United States—Description and travel)

L 24505-56 ENT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6007714

SOURCE CODE: UR/0413/56/000/003/0113/0113

21

B

AUTHOR: Gurgal', V. I.

ORG: none

TITLE: Cutting tool with a baffle-type chip breaker. Class 49,
No. 178641 14

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
no. 3, 1966, 113

TOPIC TAGS: cutting tool, chip breaker, cutter, metal chip, machine
tool

ABSTRACT: An Author Certificate has been issued for a cutting tool
with a baffle-type chip breaker. To make the unit compact, the cutter
head is designed with a slanting hole for deflecting the chip, while
the chip breaker, shaped like a plate with a recess on the supporting
side, is mounted on the upper plane of a bracket and can be adjusted
along the axis of the cutter (see Fig. 1) [LD]

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UDC: 621.9.025.69

2

L 24505-66

ACC NR. AP6007714

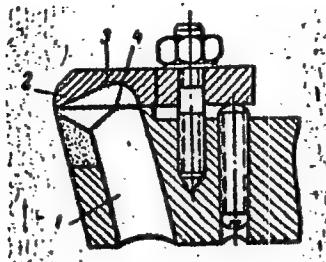


Fig. 1. Cutting tool with baffle-type
chip breaker. 1 - slanting hole; 2 -
chip breaker; 3 - recess; 4 - upper
plane of cutter

SUB CODE: 13/ SUBM DATE: 16Oct64/

Card 2/2 . BLQ

GURGENIDZE, A., Geroy Sovetskogo Soyuza

Members of the Society for the Promotion of Defense, Aviation,
and Chemical Development of the U.S.S.R. as in automobile clubs.
Za obor. 23 no.14:5 D '47. (MIRA 13:3)

1. Nachal'nik ot dela spetspodgotovki i protivovozdushnoy i protivokhimicheskoy oborone TSentral'nogo soveta Osoaviakhima Gruzii.
(Georgia—Automobile drivers)

FEYERMARK, M.M., inzhener; YERMAKOV, A.S.; STOLYAREVSKIY, N.A., inzhener;
GOL'DENBLAT, B.I., inzhener; GURGENIDZE, D.P., inzhener; KOZLOV, A.P.,
tekhnik; GORBACHEV, N.I., tekhnik; GRINBERG, B.V., inzhener.

Protection of substation power transformers in industrial plants.
Prom.energ. 12 no.10:29-33 0 '57. (MIRA 10:10)

1. Khar'kovskoye otdeleniye Gosudarstvennogo Proyektного Instituta
Tyazhpromelektroproyekt (for Feyermark). 2. Sverdlovskiy podship-
nikovyy zavod (for Yermakov). 3. Proyektnyy institut, Odessa (for
Gol'denblat). 4. Ust'-Kamenogorskij svintsovo-tsinkovyy kombinat
(for Stolyarevskiy). 5. Tbilisskiy uryadil'no-trikotazhnyy kombinat
(for Gurgenidze). 6. Kamvol'nyy kombinat, Minsk (for Grinberg).
(Electric transformers)

GURGENIDZE, G. I.

GURGENIDZE, G. I. -- "The Bakhmaro Spa." Georgian State Publishing House for Medical Literature. Tbilisi State Medical Inst. Tbilisi, 1955. (Dissertation for the Degree of Candidate in Medical Sciences).

So.: Knizhnaya Letopis', No. 2, 1956.

GURGENIDZE, G.K.

Geographical distribution of the population in Lower
Kartaliniya. Soob. AN Gruz. SSR 18 no.1:47-54 Ja '57.
(MLRA 10:5)

1. Akademiya nauk Gruzinskoy SSR, Institut geografii im.
Vakhushti, Tbilisi. Predstavлено академиком А. Дзхавахишвили.
(Georgia--Migration, Internal)

GURGENIDZE, G.S.

Treating catarrhs of the upper respiratory tracts with mineral water
from Sukhumi Spring No.2 (preliminary report). Sbor. trud. Med.nauch.
ob-vo Abkh. 2:143-144 '59. (MIRA 14:10)

1. Iz otorinolaringologicheskogo otdeleniya Sukhumskoy gorodskoy
bol'nitsy imeni V.A.Shervashidze (glavnnyy vrach N.Ye.Bendeliani).
(SUKHUMI--HEALTH RESORTS, WATERING PLACES, ETC.)
(CATAR.H)

GURGENIDZE, G.S.

Use of hemostatic gauze in otorhinolaryngology. Sbor. trud. Med. nauch. ob-vo Abkh. 2:258-259 159. (MIRA 14:10)

1. Iz otolaringologicheskogo otdeleniya Sukhumskoy gorodskoy bol'nitsy imeni V.A.Shervashidze (zav. - otdeleniyem G.S.Gurgenidze, glavnnyy vrach N.Ye.Bendeliani). (OTOLARYNGOLOGY) (BANDAGES AND BANDAGING)

3-104
S/062/62/000/005/007/003
B110/B101

128-62
AUTHORS: Kolesnikov, G. S., Gurgenidze, G. T., and Li-Fing-ying
TITLE: Carbochain polymers and copolymers. 48. Synthesis of graft copolymers with different graft frequency and length of the side chains
PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 5, 1962, 897-902

TEXT: The dependence of the properties of graft copolymers on their structure was studied by way of the polycondensation of ω -hydroxy-enanthic acid with the copolymer obtained from styrene and ω -carboxy-n-hexyl methacrylate [$\text{CH}_2=\text{C}(\text{CH}_3)\text{COO}(\text{CH}_2)_6\text{COOH}$]. By polymerizing mixtures of styrene and ω -carboxy-n-hexyl methacrylate (I) of different composition, copolymers with different content of I were obtained. Their carboxyl groups polycondensed with aliphatic ω -hydroxycarboxylic acids, whereby the mean statistical distance between the possible places for the grafting of the polyester side chains could be modified. In the copolymerization of I with styrene it was established that the mean statistical distance

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S/062/62/000/005/007/008

B110/B101

Carbochain polymers and copolymers ...

between the carboxyl groups grew with the styrene content. By changing the ratio between this copolymer and the ω -hydroxyenanthic acid in polycondensation, graft copolymers were obtained in which the mean statistical length of graft side chains could be determined by the carbon content. In N_2 current polycondensation was performed in chlorobenzene in the presence of 2% p-toluene sulfonic acid as catalyst (35 hrs) at 150-155°C, and the reaction products were precipitated with methanol. The mean statistical length reads as follows:

$a = (y_{50}8m/n + 13211 - 104.14m/n \cdot [C] - 214.25 [C]) / (128.17 [C] - 8407)$, where
 $[C]$ = carbon content in the graft copolymer in %; m/n = ratio styrene: 1.
in this connection, the length of the side chains was found to depend not on the initial copolymer but on the ratio of ω -hydroxyenanthic acid to number of carboxyl groups. The Huggins constant grows with the coefficient of side chain polymerization and is higher in graft copolymers than in the respective initial copolymers, since the symmetry of the macromolecule in solution also grows with the side chain length. The X-ray structural analysis revealed that the degree of structural ordering

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Carbochain polymers and copolymers ...

S/062/62/000/005/007/008
B110/B101

in graft copolymers rises with the length of graft side chains. No matter what the graft frequency, a good ordering degree is found with a coefficient of side chain polymerization larger than 10. Conclusions: Grafting of short polyhydroxyenamate chains shifts the thermomechanical curves to higher temperatures as compared with initial copolymers. Thus, the fusion temperature of graft copolymers of the type described rises at optimum graft frequencies and coefficients of side chain polymerization. In the methanolysis of some graft copolymers it was found that the lengths of macromolecules remain the same during the synthesis of graft copolymers. α -carboxy-n-hexyl methacrylate, polymerized for 20 hrs at 70°C in the presence of 2% by weight of benzoyl peroxide, was insoluble in benzene, chloroform, alcohol, and other organic substances, and softened at -70°C. There 2 figures and 3 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: December 15, 1961
Card 3/3

35001
S/190/62/004/005/021/023
B124/B101

15-8070

AUTHORS: Kolesnikov, G. S., Curcoidze, G. T.

TITLE: Carbon chain polymers and copolymers. XXXVIII. Interaction of isotactic polymethyl methacrylate with polyethylene azelate

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 3, 1962, 452 - 454, 386

TEXT: Isotactic polymethyl methacrylate (PMMA) was prepared by polymerizing methyl methacrylate in toluene in the presence of butyllithium; the prepared product was heated in methyl ethyl ketone for 20 hours. The intrinsic viscosities of both heated and unheated PMMA were found to be 0.52 in both cases. Both thermomechanical properties and X-ray data show a higher degree of orderliness in heated PMMA. Polyethylene azelate (PEA) was synthesized from equimolar amounts of ethylene glycol and azelaic acid reacted first in a current of dry nitrogen, and then at a residual pressure of 2 - 3 mm Hg. The intrinsic viscosity of the product was found to be 0.18. Equilibrium quantities of heated isotactic PMMA and PEA were dissolved in chlorobenzene, a few drops of concentrated HCl were added (pH ~5), Card 1/3

X

S/190/62/004/003/021/023

B124/B101

Carbon chain polymers and ...

and the mixture was heated to 120°C in a current of dry, pure nitrogen for 22 hours. The reaction products were precipitated with n-hexane, dried to constant weight at 50°C in vacuo, dissolved in toluene and reprecipitated by progressive dilution with n-hexane, whereby three fractions were obtained. The first of these fractions representing about 60% of the overall weight of the product was washed three times with methyl ethyl ketone and heated in methyl ethyl ketone for 20 hours. The intrinsic viscosity of the grafted copolymer which was found to be 0.42 is lower than that of the starting PMMA which is 0.52; the intrinsic viscosity of PMMA recovered from the grafted copolymer by methanolysis was 0.52. The decrease of the intrinsic viscosity on grafting lateral polyester chains to PMMA is due not to de-graftation of the main polymer chain, but to a change of the MMA macromolecule in solution which, in turn, is assumed to be due to the interaction of the lateral polyester chains leading to a more symmetrical three-dimensional shape of the polymer molecule. This fact is reflected by a value of 0.46 of the Huggins constant for the initial PMMA and MMA recovered from the grafted copolymer by methanolysis, while this value is 0.65 for the grafted copolymer. The lowered softening temperature of the grafted copolymer and the increased softening temperatures of the most isotactic polymers

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Carbon chain polymers and ...

S/190/62/004/003, 021/023

B124/B101

which are both due to heating can be explained to be a consequence of the three-dimensional orientation of the main polymethylmethacrylate chain which leads to a decrease of the orderliness of packets consisting of lateral polyester chains which is reflected by the decrease of the softening temperature of the grafted copolymer. This change of orderliness of the bundles is not significant enough to be visible on usual X-ray diagrams, but it is evident from the thermomechanical properties. There are 2 figures and 7 references: 6 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: M. L. Huggins, J. Amer. Chem. Soc. 64, 2716, 1942. *X*

ASSOCIATION: Institut elementoorganicheskikh soyedinenii AN SSSR
(Institute of Elemental Organic Compounds of the AS USSR)

SUBMITTED: March 15, 1961

Card 3/3

37913
S/251/62/028/003/001/001
I018/I218

15.8070

Author: Kolesnikov, G. S. and G. T. Gurgenidze.

Title: COPOLYMERIZATION OF METHACRYLATE ω -OXYENANTHIC ACID
POLYESTER WITH ACRYLONITRILE, STYRENE, AND VINYL ACETATE

Periodical: *Soobshcheniya Akademii nauk Gruzinskoy SSR.* 28(3), 1962, 297-303

Text. Studies were made on the following systems: methacrylate ω -oxyenanthic acid polyester (MPOE) — acrylonitrile; MPOE-styrene; and MPOE-vinyl acetate. The synthesis of MPOE and of polyoxyenenate are described. Thermomechanical and chemical properties of polyoxyenenate are given. The polyester was prepared by polycondensation of ω -oxyenanthic acid at first in oxygen-free stream of nitrogen and then in vacuum of 3-4 mm. The product was dissolved in toluene and an excess of methacrylic acid chloroanhydride at 10-15°C added. The reaction mixture was kept for 5-6 hours. The product was precipitated by *n*-hexane and dried at room temperature to constant weight. Polymerization of MPOE with acrylonitrile yielded copolymers of various composition. Copolymerization was carried out in the presence of 0.2M % of azo-iso-butyric acid dinitrile (in M % from acrylonitrile) at 70°C during 15 hours in vacuum sealed ampules. The copolymer was dissolved in dimethylformamide, precipitated by methanol and dried. MPOE excess can be removed by extraction with boiling benzene. Analysis, by N determination. Thermomechanical properties of the copolymer

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COPOLYMERIZATION....

S/251/62/028/003/001/001
I018/I218

are described. Copolymerization with styrene was carried out in the presence of 1.7 weight % (from styrene) of benzyl peroxide, at 70°C for 15 hours in vacuum sealed ampules. The product was dissolved in benzene, precipitated by methanol and dried. Copolymer composition determined by C content. Copolymerization of MPOE with vinyl acetate was carried out in the presence of 0.2M % (from vinyl acetate) of azo-iso-butyric acid dinitrile at 70°C for 30 hours in vacuum sealed ampules. Copolymer precipitated from 2% acetone solution by *n*-hexane, washed with *n*-hexane and benzene and vacuum dried. Composition determined by C content. Copolymerization of MPOE with acrylonitrile, styrene, and vinyl acetate yielded products with side chains of varying purity. Their properties in solutions and condensed form were determined. There are 3 figures and 3 tables.

Association. Akademiya nauk Gruzinskoy SSR Institut priklodnoi khimii i elektronikhimii. (AN Georgian SSR Institute of Applied Chemistry and Electrochemistry).

Submitted: April 12, 1961.

Card 2/2

KOLESNIKOV, G.S.; GURGENIDZE, G.T.

Carbochain polymers and copolymers. Report No.49: Graft copolymers obtained from methacrylate of ω -oxyenanthic acid polyester and methacrylyltriethylstannane or methacrylyltriethylgermane. Izv.AN SSSR.Otd.khim.nauk no.7:1275-1279 Jl '62. (MIRA 15:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Heptanoic acid) (Tin organic compounds)
(Germane)

S/190/62/004/011/C09/014
B106/B101

AUTHORS: Kolesnikov, G. S., Gurgenidze, G. T.

TITLE: Carbochain polymers and copolymers. XLII. Graft copolymers from acrylonitrile and ω -hydroxyoenanthic polyester methacrylate

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 11, 1962,
1709 - 1713

TEXT: Graft copolymers were prepared by bringing acrylonitrile into reaction with the ω -hydroxyoenanthic polyester methacrylate I; molecular weight 6000. The copolymerization was carried out in bulk (in the presence of azoisobutyric dinitrile for 15 hrs at 70°C in vacuo) and in emulsion (in the presence of ammonium sulfate for 6 hrs at 50°C; soap as emulsifier). Intrinsic viscosity, Huggins' constant, and the ratio polyester/acrylonitrile of the graft copolymers obtained were determined. When the content of I increases in the initial mixture, the number of grafted side chains in the copolymer also increases. A rising frequency of grafting is associated with greater symmetry of the macromolecules in solution (increase of the Huggins' constant). This is due to interaction

Carbochain polymers...

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B106/B101

of the polyester side chains. When the side chains are split off by methanolysis the Huggins constant is reduced and at the same time the intrinsic viscosity of the copolymer is increased. Hence, the decrease in symmetry of the macromolecules in solution is not caused by degradation of the main chain of the graft copolymer. The yield Λ of the products of methanolysis is consistent with the values calculated by the equation $\Lambda(\%) = 53Q/(53Q + 6000)$ (Q is the distance between the grafted side chains of the polyester, expressed by the number of elementary links of acrylonitrile). The grafting of I side chains to polyacrylonitrile results in a decrease of the softening point of the polymers, this decrease being the more marked, the smaller the value of Q . Analysis of the x-ray pictures of grafted copolymers with different grafting frequencies showed that the structural ordering of the copolymer decreases with increasing Q . The reason evidently is that with increasing Q the ordered regions formed by interaction of the polyester side chains in the condensed phase decrease in proportion to the total volume of the graft copolymer. There are 3 figures and 2 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: July 6, 1961
Card 2/2

S/062/62/000/011/019/021
B117/B101

AUTHORS: Kolesnikov, G. S., and Gurgenidze, G. T.

TITLE: Synthesis of graft copolymers from isotactic polymethyl methacrylate and polyhydroxyenanate.

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1962, 2097-2098

TEXT: Crystalline graft copolymers with heterogeneous hydrocarbon chains were synthesized from the isotactic polymethyl methacrylate and from the polyhydroxyenanate obtained by polycondensation of ω -hydroxyenanthic acid (molecular weight, 7400; intrinsic viscosity, 0.22 dl/g (benzene, 20°C)) in chlorobenzene solution at 120°C under an atmosphere of nitrogen. The yield of the reaction product precipitated from a 4% solution in C_6H_5Cl having eight times the volume of the n-hexane amounted to 85% of the total weight of the compounds used. After precipitation with n-hexane, three fractions were separated at 20°C by coarsely fractionating a 2% benzene solution of the reaction product. Fractions I and II were found to be graft copolymers containing polyhydroxyenanate and having side chains with

Card 1/2

Synthesis of graft copolymers from...

S/062/62/000/011/019/021

B117/B101

different grafting frequencies. X-ray structural analysis and the thermomechanical properties of fraction III indicated that it corresponded to the polyhydroxyenanate. The intrinsic viscosities of fractions I and II are lower than that of the isotactic polymethyl methacrylate (0.45 and 0.32 dl/g, respectively, as compared to $[\eta] = 0.46$ dl/g of the polymethyl methacrylate); their Huggins constants, however, are higher (0.55 and 0.80, respectively, as compared with 0.46 of the polymethyl methacrylate) while their softening points are lower. The fact that the values of fraction II exceed those of fraction I is ascribed to its ordered structure. Moreover, it is more readily soluble in benzene and n-hexane, owing to the higher grafting frequency of its side chains. There are 1 figure and 1 table.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR); Institut prikladnoy khimii i elektrokhimii Akademii nauk GruzSSR (Institute of Applied Chemistry and Electrochemistry of the Academy of Sciences GSSR)

SUBMITTED: June 29, 1962

Card 2/2

S/062/63/000/002/015/020
B144/B186

AUTHORS: Gurgenidze, G. T., Kolesnikov, G. S., and Li Fyn-ying

TITLE: Carbochain polymers and copolymers. Communication 51. Graft copolymers from aliphatic ω -hydroxycarboxylic acids and the copolymer of styrene with N-(ω -carboxy-n-hexyl)methacryl amide

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 2, 1963, 365 - 368

TEXT: Based on previous studies (Izv. AN SSSR. Otd. khim. n. 1962, 897), graft copolymers were obtained by polycondensing ω -hydroxy enanthic (I), or ω -hydroxy pelargonic acid (II), with the 50:1 copolymer (III) of styrene and N-(ω -carboxy-n-hexyl) methacryl amide obtained at 80°C in the presence of benzoyl peroxide. For III, the thermomechanical properties, the intrinsic viscosity (0.43 dl/g), the mean composition (C 91.81 %, H 7.77 %), and the Huggins' factor (0.43) were determined. The length of the side chains of the graft copolymer depended on the ratio of III to I or II. Polycondensation was effected in chloro benzene at 130 - 135°C in the presence of 2 % by weight p-toluene sulfonic acid (with respect to I or II) within 30 hrs. The length of the polyester side chains was derived from the C content of the

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Carbochain polymers and...

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B144/B166

graft copolymers according to the formula published previously. It increased with increasing initial concentrations of I or II. The increasing Huggins' factor and decreasing intrinsic velocity prove that the symmetry of the macromolecules is enhanced when the side chains grow longer. For side chains, with equal polymerization coefficients, the symmetry was higher in the graft copolymers of II than in those of I, corresponding to a longer main chain in the polyester of II. This supports an earlier suggestion (Vysokomolek. soyed. 1, 1733 (1959)) that the symmetry depends on the interaction of the side chains in the macromolecule. The ordering of the graft copolymers increased with increasing length of the side chains. Methanolysis effected complete splitting-off of the graft side chains; its final product had the same intrinsic viscosity and Huggins' factor as the initial copolymer. The softening point decreased when the side chains grew longer. This proves that the side chains (interdistance 133) have only a plastifying effect. There are 1 figure and 1 table.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: April 2, 1962
Card 2/2

S/190/63/005/004/007/020
B101/3220

AUTHORS: Kolesnikov, G. S., Gurgenidze, G. T.

TITLE: Carbochain polymers and copolymers. XLV. Grafted copolymers from ω -hydroxy enanthic polyester methacrylate and styrene or vinyl acetate

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 524-530

TEXT: ω -hydroxy enanthic polyester methacrylate (HEPM), the synthesis of which has been described already (Vysokomolek. soyed., 4, 1709, 1962), was copolymerized with styrene in evacuated ampoules at 70°C for 15 hr in the presence of 1.7 weight% benzoyl peroxide (related to styrene). The weight ratio styrene: HEPM was 83.86 : 16.14, molar ratio 300:1. The polymer was fractionated by precipitating with methanol at 20°C; the intrinsic viscosity, the Huggins number and the distance Q between the grafted HEPM branches was determined, expressed in styrene links. The first fraction consisted of polystyrene. For the fractions 2 - 7, $[\eta]$ decreased from 0.475 to 0.230, the Huggins number increased from 0.29 to 1.88, and Q dropped from 3420 to 3. The absence of inflections in the thermomechanical curves confirmed that this is a case of true grafted poly-

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Carbochain polymers and ...

S/190/63/005/004/007/020
B101/B220

mers and not of mixtures. X-ray analysis showed that the ordering of the copolymer increased with decreasing Q. HEPM was copolymerized with vinyl acetate for 30 hrs at 70°C in the presence of 0.2% azoisobutyric dinitrile (related to vinyl acetate). Here again $[\eta]$ decreased and the Huggins number increased with increasing grafting. The thermomechanical curves became flatter when Q increased, showing that the HEPM side branches had a plasticizing effect only. There are 3 figures and 5 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: September 18, 1961

Card 2/2

L 38501-66 ENT(m)/T/EWP(j) IJP(c) RM/JWD/AN
ACC NR: AP6018138

SOURCE CODE: UR/0251/66/041/001/0061/0065

29
B

AUTHOR: Gurgenidze, G. T.

ORG: Academy of Sciences, GruzSSR, Institute of Inorganic Chemistry and
Electrochemistry, Tiflis (Akademiya nauk Gruzinskoy SSR Institut
neorganicheskoy khimii i elektrokhimii)

TITLE: Catalytic copolymerization of methylmethacrylate with the
methacrylate polyester of omega-hydroxyenanthic acid

SOURCE: AN GruzSSR. Soobshcheniya, V. 41, no. 1, 1966, 61-65

TOPIC TAGS: catalytic polymerization, copolymerization, block
copolymerization, polyester plastic, polymerization catalyst, polymer
structure, METHYL METHACRYLATE

ABSTRACT: The catalytic graft copolymerization of methylmethacrylate
(MMA) with the methacrylate polyester of ω -hydroxyenanthic acid (MPOE)
was studied. The catalytic copolymerization was effected in the presence
of butyllithium in toluene solution under nitrogen atmosphere at -50° to
-60°C. As the MPOE content of the copolymer was increased the reaction
time increased, the number of grafted links increased, characteristic

Card 1/2

L 38501-66

ACC NR: AP6018138

O

viscosity decreased but basic chain length remained essentially unchanged, melting temperature was raised and the ordered structure of the synthesized polymers increased. Orig. art. has: 2 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 12Mar65/ ORIG REF: 005/

Card 2/2

pb

L 00813-67 ENT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6028029

SOURCE CODE: UR/0251/66/042/001/0073/0078

AUTHOR: Gurgenidze, G. T.

ORG: Institute of Inorganic Chemistry and Electrochemistry, Academy of Sciences
Georgian SSR (Institut neorganicheskoy khimii i elektrokhimii, Akademiya nauk
Gruzinskoy SSR)

TITLE: Synthesis of graft copolymers on the basis of isotactic polymethylmethacrylate and heterochain complex polymers

SOURCE: AN GruzSSR. Soobshcheniya, v. 42, no. 1, 1966, 73-78

TOPIC TAGS: copolymer, graft copolymers, polyester, polymethylmethacrylate, copolymerization, heterochain complex

ABSTRACT: The author uses two methods to obtain graft copolymers from isotactic polymethylmethacrylate (PMMA) with a heterochain complex polyester. The first method is the transesterification reaction, and the second is the catalytic co-polymerization of methylmethacrylate (MMA) with a polymer containing one unsaturated terminal group. Their properties in solution and in condensate are shown.

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L 00813-67

ACC NR: AP6028029

2

The author shows that catalytic copolymerization of methylmethacrylate (MMA) with the methacrylate of a polyester from Omegahydroxyenanthic acid (MPOE) can produce graft copolymers for which the mean statistical values of grafting frequency can be determined. Part of the experimental work was done at the Laboratory of Organo-elemental Carbochain Polymers of the Institute of Organoelemental Compounds, Academy of Sciences SSSR, under the direct supervision of G. S. Kolesnikoy. The article was presented by academician R. I. Agladze on 19 March 1965. Orig. art. has: 4 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 19Mar65/ ORIG REF: 007/

Card 2/2 vlr

ACC NR: AR6022898

(A)

SOURCE CODE: UR/0081/66/000/005/S043/S043

AUTHOR: Gurgenidze, G. T.; Kolosnikov, G. S.; Fyn-in LiTITLE: Synthesis of graft copolymers with known mean statistical values of the grafting frequency and length of the side branchesSOURCE: Ref. zh. Khimiya, Part II, Abs. 5S256REF SOURCE: Sb. Issled. v obl. elektrokhimii i radiats. khimii. Tbilisi, Metsniyereba 1965, 102-111TOPIC TAGS: graft copolymer, methacrylateABSTRACT: Copolymers of ω -carboxy-n-hexyl methacrylate and N-(ω -carboxy-n-hexyl)methacrylamide with styrene were prepared, and their reaction with ω -hydroxyenanthic and ω -hydroxypelargonic acids was used to synthesize carbon heterochain graft copolymers with known mean statistical values of the grafting frequency and length of the side branch. The dependence of the properties of the graft copolymers obtained on the grafting frequency and length of the grafted branches was studied. Authors' abstract.
[Translation of abstract].

SUB CODE: 07

Card 1/1

GURGENIDZE, G.V.

Experimental bronchial asthma in a rabbit. Soob. AM Gruz. SSR
22 no.5:593-596 My '59. (MIRA 12:11)

1. Tbilisskiy gosudarstvennyy meditsinskiy institut. Predstav-
leno akademikom K.D. Bristavi.
(ASTHMA)

GURGENIDZE, G.V., kand. med. nauk; KANDELAKI, D.P., red.izd-va; KHUNDADZE,
Z.G., tekhn. red.

[Materials on the pathogenesis of bronchial asthma] Materialy k pa-
togenetiku bronkhial'noi astmy. Tbilisi, Gos. izd-vo "Sachchota Sakart-
velo," 1960. 118 p. (MIRA 14:7)

(ASTHMA)

GURGENIDZE, G.V.; MALSAYA, V.R.; SUKHARULIDZE, A.I.

Effect of aminazine on the blood sugar level. Soob. An Gruz.
(MIRA 14:1)
SSR 25 no. 4:413-416 0 '60.

1. Ministerstvo zdravookhraneniya Gruzinskoy SSR, Nauchno-
issledovatel'skaya laboratoriya pitaniya, Tbilisi. Predstavлено
akademikom K.D. Eristavi.
(CHLORPROMAZINE) (BLOOD SUGAR)

GURGENIDZE, G. V.

Doc Med Sci - (diss) "Clinico-experimental materials on the pathogenesis of bronchial asthma." Tbilisi, 1961. 24 pp; (Tbilisi State Medical Inst); 180 copies; free; (KL, 6-61 sup, 234)

GOANIASHVILI, Sh.I.; GURGENIDZE, G.V.; RACHVELISHVILI, B.Kh.

Treatment of bronchial asthma with hormonal preparations.
Soob. AN Gruz. SSR 27 no.6:793-796 D '61. (MIRA 15:2)

1. Tbilisskiy gosudarstvennyy meditsinskiy institut. Predstavleno
akademikom K.D. Kristavi.

(ASTHMA)
(HORMONE THERAPY)

Gurgenidze, M.
USSR / Cultivated Plants. Fruits, Berries

L-6

Abs Jour : Ref Zhur - Biol., No 6, March 1957, No 22829

Author : Gurgenidze, M.G.

Inst : Not Given

Title : How to Promote the Germination of Stone Seeds.

Orig Pub : Sad i ogorod, 1956, No 6, 45-46

Abstract : A very simple method is proposed for destroying the solidity of the outer cover in stone seeds. The seeds are soaked in water for several days and are then spread in the sun, as a result of which the seed shell splits. These seeds germinate best when sown in the month of October.

Card : 1/1

GURGENIDZE, M.G.

Materials on the biology of a walnut. Izv. AN Arm. SSR. Biol. nauki
13 no.5:73-79 My '60. (MIRA 13:9)

1. Opytnaya stantsiya plodovodstva Ministerstva sel'skogo khozyaystva
Gruzinskoy SSR, selo Skra, Goriyskogo rayona GruzSSR.
(WALNUT) (GRAFTING)

GURGENIDZE, M.Z.

Results of the application of the herbicide 2,4-D on summer
pastures. Vest. Bot. ob-va Gruz. SSR. no.1:123-130 '62.
(MIRA 17:1)

SOV/ 105-50-7-16/32

AUTHORS: Gurgenidze, M. Z., Engineer, Sevryugin, I. K., Engineer

TITLE: Device for the Measurement of the Angle Between the Voltage-
and EMF-Vectors of a Synchronous Machine (Ustroystvo dlya
izmereniya ugla mezhdu vektorami napryazheniya i e.d.s.
sinkhronnoy mashiny)

PUBLICATION: Elektricheskoe, 1958, Nr 7, pp. 65 - 67 (USSR)

ABSTRACT: A somewhat more accurate method for the determination of
the static and dynamic overload capacity of a synchronous
machine by means of the angle-characteristic of the power
developed in the case of different modes of operation is
described. Construction can be carried out in the completest
manner according to the oscillographic recordings of the
changes of the actual efficiency and of the angle θ both
in the case of slow and of rapid changes of load. The de-
vice for measuring the angle θ must warrant continuous re-
cording. The most promising was the device for measuring the
angle θ , which was carried out according to the circuit
developed by the Institute of Water Power Engineering AS of the
Armenian SSR (Ref 4). This construction, however, entails

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SOV105-58-7-16/32

Device for the Measurement of the Angle Between the Voltage- and EMF-Vectors of a Synchronous Machine

a distortion of the linear relation between the angle θ and the voltage at the filter output. This fault was corrected in the device designed according to the new circuit (which is given here). The results obtained by the experimental examination of this device are described by oscillograms. The data obtained from tests show that this device may be used for the investigation of the enforced oscillations of the synchronous machines (oscillations with high angular accelerations), as well as of the free oscillations (with low angular accelerations). This device may also be used as a linear angular transmitter in connection with various control devices. There are 4 figures and

Soviet references.

ASSOCIATION: Institut elektromekhaniki Akademii nauk SSSR
(Institute of Electromechanics, AS USSR)

SUBMITTED: July 15, 1957

Card 2/3

SOY147-58-7-16,52
Device for the Measurement of the Angle Between the Voltage- and Current-Vectors of a Synchronous Machine

1. Electromotors--Testing equipment 2. Oscillographs--Applications

Card 5/3

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radiation of the nucleus. V. Mamasakhlisov and V. Gurgenidze (Stalin State Univ., Tbilisi). *J. Exptl. Theoret. Phys.* (U.S.S.R.) 17, 673-80 (1947) (in Russian).—The matrix elements $H_{l,m}^{(1)}$ of the energy of interaction of the electron with the radiation are calcd. for various l and m , giving the no. N_l of electrons expelled from the M shell by $N_l = (2Z'/\pi\hbar^2) \sum H_{l,m}^{(1)}$, the sum extending from $l = 0, m = -l$ to $l = 2, m = l$; the no. of quanta leaving the nucleus being given by $N_\gamma = (a_\gamma^2)/e^2\hbar k$, the coeff. of internal conversion $a_\gamma^2 = \beta/(1 + \beta)$, where $\beta = N_\gamma/N_l$. With an effective nuclear charge $Z' = 27$, one finds, for γ -quantum energies E of 0.01, 0.03, and 0.08 meV units, the following values of β : ($l = 1$) 235.6, 4 and 0.165; ($l = 2$) 3930, 66.6 and 1.04; ($l = 3$) 3.2×10^4 , 982.5 and 7.8, i.e., β increases with decreasing E and with increasing order of the multipole, as in conversion in the K and L shells. Data of Zavalevich (*C.A.*, 36, 37284) permit comparison of the a_γ^2 in the L and in the M shell: for $l = 1, 2$, and 3 , $a_\gamma^2 = 0.51, 0.97$, and 0.99 ; $a_\gamma^2 = 0.14, 0.51$, and 0.88 .

N. Thom

GURGENIDZE, V.

USSR/Nuclear Physics - Bombardment
Ionization
Pair Production

Aug 49

"Radiation of the Ultraluminous Type During the Passage of Charged Particles Through a Ferromagnetic," D. Ivanenko, V. Gurgenidze, Moscow State U imeni M. V. Lomonosov, Tbilisi State U imeni I. V. Stalin, 4 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 6

Attempts to show that when charged particles pass through a ferromagnetic, along with ionization losses, radiation of the ultraluminous Cherenkov type if v (speed of particle) exceeds $c/m_0^{1/2}$, where m_0 is the static magnetic permeability of the medium (where $e = n^2$ is set equal to 1), n being the index of refraction, must occur. Submitted by Acad S. I. Vailov 28 Jun 49.

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